

# **CITY OF REDMOND**

## **CLEARING, GRADING, AND STORMWATER MANAGEMENT**

### **TECHNICAL NOTEBOOK**

#### **Issue Number 4**



### **DEVELOPMENT SERVICES DIVISION**

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## FOREWORD

This document may be referred to as the Stormwater Technical Notebook. This document constitutes Appendix 20D-5 of the Redmond Community Development Guide.

This document contains the goals, specifications, standards and details for clearing, grading, and stormwater management authorized and required by Sub-section 20.E.90.10.020(2) of the Redmond Community Development Guide (RCDG). Note that Chapter 20E.90 of the RCDG is the primary code basis for clearing, grading, and stormwater management and should, therefore, also be reviewed.

This October 1, 2004 issue is being submitted to the Department of Ecology (DOE) and is subject to revisions based on comments from that agency. Please make sure you have provided your name and mailing or email address to Public Works, Development Services Division at (425)556-2760 or [pwgen@redmond.gov](mailto:pwgen@redmond.gov) to obtain revisions.

### **Vesting**

This document is subject to revision from time to time. The issue dates are shown on the front cover. The issue of this manual that applies to a particular project is the issue that is (or was) in effect when the proposed project was "vested."

A project subject to a Building Permit is vested when a Building Permit Application is submitted that is deemed complete by the City. A Preliminary Plat or a Short Plat is vested when the application for the Preliminary Plat or Short Plat is submitted and is deemed complete by the City. A project involving only clearing or grading is vested when an application for the clearing and/or grading work is submitted and determined to be complete by the City.

For further information, contact the Permit Center or the Stormwater Engineer.

### **Overview of Changes from Previous Issue**

City of Redmond requirements have been updated to complement the 2001 Department of Ecology Stormwater Management Manual for Western Washington (2001 Ecology Manual).

Restrictions have been placed on the on-site infiltration approach. First, pretreatment of all water (not just the water quality storm) which can be contaminated and which flows into an infiltration system must be treated if the site is in Wellhead Protection Zone 1 or 2. Second, an aquitard may only be utilized if it forms the bottom of an open pond that has vehicle access for regular maintenance.

To promote consistency with the 2001 Ecology Manual, projects in Redmond are now called Small, Medium, and Large (for stormwater management purposes) based on the 2001 Ecology Manual's size classifications. Project classification is described in Chapter 3. Note that Small Projects (adding less than 2,000 square feet of impervious area and involving less than 7,000 square feet of land disturbing activity) now must address the 2001 Ecology Manual Minimum Requirement #2 (Construction Stormwater Pollution Prevention). Medium-sized projects must address Minimum Requirements #1 through #5. Large-sized projects must address all ten Minimum Requirements.

The City of Redmond “Rainy-Season Guidelines” for construction from October 1 through April 30 have been included in the Stormwater Technical Notebook as Chapter 15. Local Design Practices (Chapter 2) now include additional topics and adjustments for consistency with the 2001 Ecology Manual.

# CLEARING, GRADING, AND STORMWATER MANAGEMENT TECHNICAL NOTEBOOK

## TABLE OF CONTENTS

Chapter	Title	Page
	<b>INTRODUCTION .....</b>	<b>1</b>
<b>PART I</b>	<b>ORIENTATION .....</b>	<b>5</b>
1	Modifications to the 2001 Department of Ecology Manual .....	7
2	Local Design Practices .....	25
3	Project Classification in Redmond .....	37
4	Small Project Requirements .....	39
<b>PART II</b>	<b>MEDIUM PROJECTS .....</b>	<b>45</b>
5	Medium Projects: Fees and Permit Process .....	47
6	Medium Projects: Application Requirements .....	51
<b>PART III</b>	<b>LARGE PROJECTS .....</b>	<b>53</b>
7	Large Projects: Fees and Permit Process .....	55
8	Large Projects: Application Requirements .....	61
9	Large Projects: Construction Documents .....	63
10	Rough Grading Permits .....	65
<b>PART IV</b>	<b>DESIGN INFORMATION .....</b>	<b>67</b>
11	Design Goals .....	69
12	Detailed Design Standards .....	71
13	Key Points for Construction Phase Pollution Prevention .....	79
14	Contents of Construction Stormwater Pollution Prevention Plan .....	83
15	Standards for Engineering Drawings .....	87
	<b>APPENDICES .....</b>	<b>107</b>
A-1	Stormwater Management Code (RCDG 20.E.90.10.020) .....	109
A-2	Forms .....	111
A-3	Standard Notes .....	121
A-4	Plan Review Checklists .....	123
A-5	RCDG Section 20E.90.10 with new revisions .....	133

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# **INTRODUCTION**

The Clearing, Grading, and Stormwater Management Technical Notebook herein referred to as the Stormwater Technical Notebook supplements the 2001 Department of Ecology Stormwater Management Manual for Western Washington, defines how the 2001 Ecology Manual is to be applied in the City of Redmond, and provides information and standards specific to stormwater management in Redmond. The Stormwater Technical Notebook is intended to assist those who prepare and submit applications and construction documents by providing design requirements and processing information. The methods outlined in the Stormwater Technical Notebook are not the only methods acceptable for use in the City, but any deviations from these methods must still meet or exceed the intended results and be reviewed and approved by the City. In cases where the information or requirements in the Stormwater Technical Notebook are different from the 2001 Ecology Manual, the Stormwater Technical Notebook will govern. A summary of modifications and additions to the 2001 Ecology Manual is presented in Chapter 1 of the Stormwater Technical Notebook.

## **Code Requirements**

Code requirements regarding stormwater management are outlined in the Redmond Community Development Guide under 20E.90. The Stormwater Technical Notebook is a supplement to the code and the code should also be reviewed to understand the procedures and requirements.

## **Documents Adopted by Reference**

The following documents are adopted by reference:

- A. Redmond Community Development Guide Section 20E.90, Latest Edition.
- B. The 2001 Department of Ecology Stormwater Management Manual for Western Washington, dated August 2001, or its successor when approved by the Public Works Director.
- C. Standard Specifications and Details for Public Works Construction, prepared by the City of Redmond Public Works Department, Latest Edition.

## **Accepted Standards**

Drainage proposals must reasonably comply with accepted legal principles of drainage law in Washington State and be based on sound engineering principles.

Additional City of Redmond requirements and special conditions listed on a specific project's permits apply to clearing, grading, or stormwater work in specific circumstances. While not necessarily a complete list, the following programs often apply to clearing, grading, and/or stormwater work in or near Sensitive Areas (defined in the Redmond Community Development Guide, Chapter 20D). Contact the City of Redmond Permit Center for more information about these programs:

- Shoreline Management Program – Can apply to projects near Bear Creek, Evans Creek, the Sammamish River, Lake Sammamish, or their floodplains.
- Sensitive Area Management – Can apply if your project proposes work within steep slopes, wetlands, wetland buffers, streams, stream buffers, floodplains, or Wellhead Protection Zone 1 or 2 (as defined in the Redmond Community Development Guide).

Other agencies may also have requirements and permits related to work in Redmond. While not necessarily a complete list, the following agencies and their permits have been a part of many projects in Redmond:

- State Department of Fish and Wildlife -- Hydraulics Project Approval (HPA) for work in surface waters or defined channels that carry surface water.
- State Department of Ecology -- NPDES Permit(s): programs related to water quality management where sites clear over 1 acre.
- Corps of Engineers -- programs related to wetlands.
- Federal Emergency Management Agency -- programs related to flood protection near major streams and rivers.

Also note that any work proposed beyond the applicant's property limits requires written concurrence of the owners of those properties.

### **Contents of the Stormwater Technical Notebook**

Chapter 1 is the orientation.

Chapter 2 contains a detailed listing of the sections of the 2001 Ecology Manual showing what applies in Redmond, what applies with modifications or clarifications, and what does not apply in Redmond.

Chapter 3 shows how to classify a project in Redmond (Small, Medium, or Large) and which minimum requirements from the 2001 Ecology Manual apply to each project classification. This is a key chapter for defining the stormwater management required for a specific project.

Chapter 4 describes minimum requirements for Small Projects.

Chapters 5 and 6 contain information related to Medium Projects. Chapter 5 outlines the fees to be paid and the permit process. Chapter 6 deals with initial application requirements.

Chapters 7 through 9 contain information related to Large Projects. Chapter 7 outlines the fees to be paid and the permit process. Chapter 8 deals with initial application requirements. Chapter 9 deals with standards for construction documents prepared for Large Projects.



Chapter 10 presents information about Rough Grading Permits. When appropriate, Rough Grading Permits are issued for clearing, grading, and certain types of stormwater work which is part of projects involving other work as well (buildings, plats, short plats, etc.) but where the clearing, grading, and related stormwater work can be started in advance of the other construction.

Chapters 11 through 15 provide information about what the permit review process is trying to achieve in terms of project performance and construction details. Chapter 11 presents general design goals as the target towards which we are aiming. Chapter 12 contains detailed design standards. Chapter 13 presents the construction phase pollution prevention objectives for use within Redmond. Chapter 14 contains the construction phase pollution prevention general standards. Chapter 15 contains Rainy-Season Guidelines.

The Appendices contain a list of key references (Appendix A-1) copies of key stormwater forms (Appendix A-2), Standard Notes to be included on drawings (Appendix A-3), and Plan Review Checklists used to review the information submitted (Appendix A-4). Appendix A-5 contains the revised code language that adopted the 2001 Ecology Manual and other stormwater management changes.

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